

X2 | ENGINEERING

CAPABILITIES STATEMENT



WHO WE ARE

X2 Engineering is a Western Australian company founded in 2011 dedicated to providing engineering services to the resources sector. Drawing on our expertise and experience, we can provide results in electrical, control systems and automation engineering of the highest quality.

At X2 Engineering we are passionate about what we do and embrace the challenges involved in providing optimal project solutions. Our focus on innovative, sustainable and creative engineering applications and processes, coupled with our understanding of project economics allow us to guarantee great client outcomes.

We are committed to forming strong working partnerships with our clients, be they multinationals or small local firms, suppliers and contractors to enable the best projects outcomes from design through to commissioning.



WHAT MAKES US DIFFERENT?

At X2 Engineering, we know what makes electrical and automation projects work. It requires a solid understanding of all project facets built on communication between all parties. We provide ourselves on our ability and commitment to consult widely with stakeholders to correctly identify project requirements before drawing on our expertise and experience to determine the optimum engineering solution.

We are committed to remaining abreast of the latest in industrial automation technology, aided by our strong supplier relationships, so our clients can be confident they will always receive the most current solutions as equipment, software and strategies evolve. With this knowledge, we are able to deliver outcomes that exceed client requirements whilst maintaining a time and budget focus.



Our People

As an engineering services company, X2 Engineering know that our staff are the single most critical factor to our success. As a result, we are committed to attracting and retaining only the best technical and engineering staff.

Our engineers and management staff are experts in their fields and remain at the forefront of industry processes and technology. This ensures not only the personal and professional development of our staff, but our clients always receive the most current performance and advice.

We believe the diversity of our people breeds a diversity of views and skills, allowing us to provide a more rounded service without compromising performance.

ENGINEERING DESIGN

X2 Engineering has the experience and expertise to provide services across a range of engineering areas around the automation and control of industrial equipment and products.

Control Systems

- > PLC and HMI programming and integration of all major brands (Allen Bradley, GE, Omron, Schneider, Siemens)
- > DCS programming and integration (PCS7, Yokogawa)
- > RTU programming and integration (Miri, Koyo, King-Fisher)
- > SCADA Systems (Citect, WinCC, Wonder Ware)
- > Communication Systems and Industrial Networking
- > Technical documentation (Functional specifications, Software philosophies, Training documents, Acceptance testing procedures, Site Acceptance Procedures)
- > Acceptance testing and validation
- > Remote Operations

Industrial Networking and IT

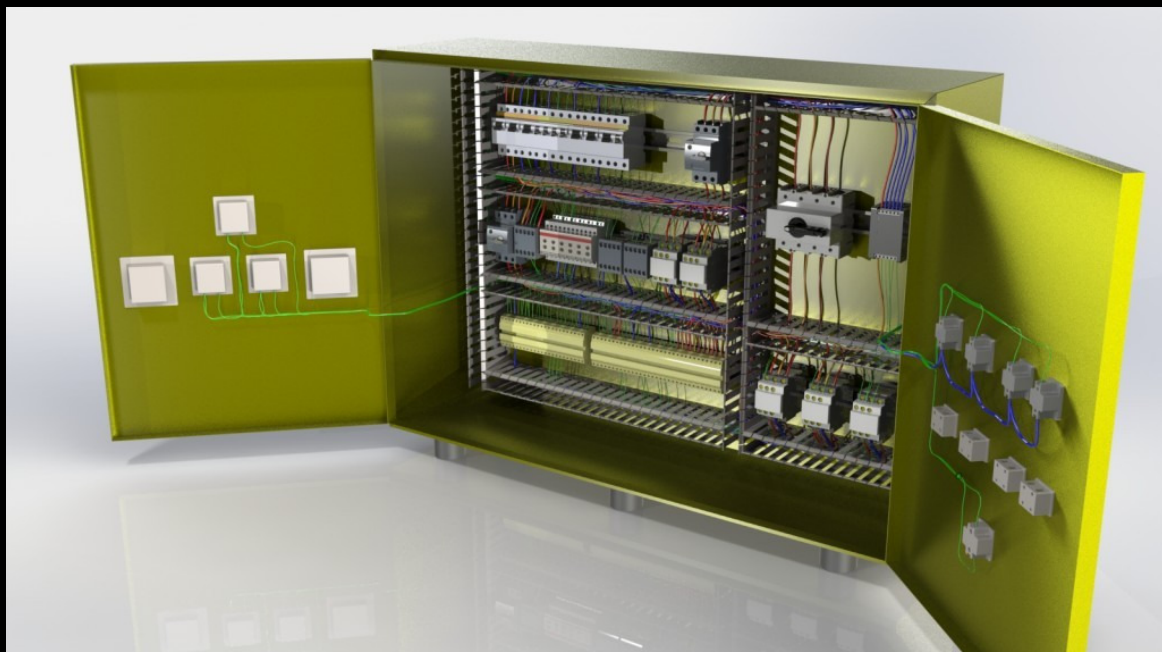
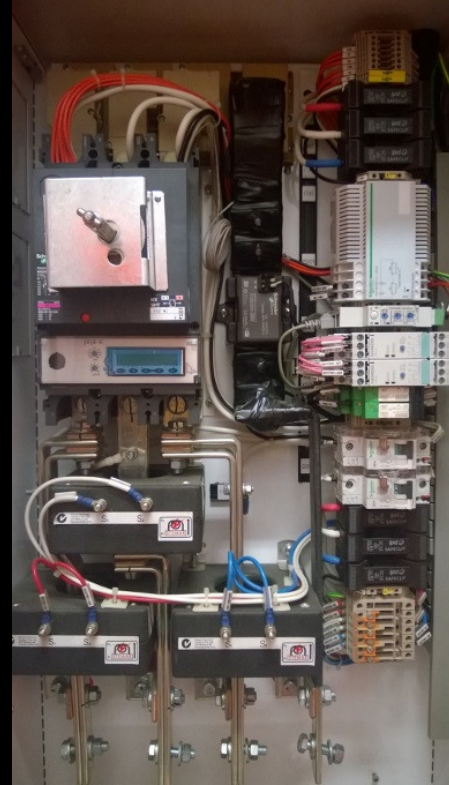
- > LAN and WAN Design
- > Radio Network Design including long distance communications
- > Fault tolerant networking and redundancy system design
- > Control System networking and field bus design (Profibus DP, Profibus PA, Modbus and Profinet)
- > Communication Systems and Industrial Networking
- > Control System IT associated equipment including servers, control rooms and remote access



ENGINEERING DESIGN

Electrical Design Services

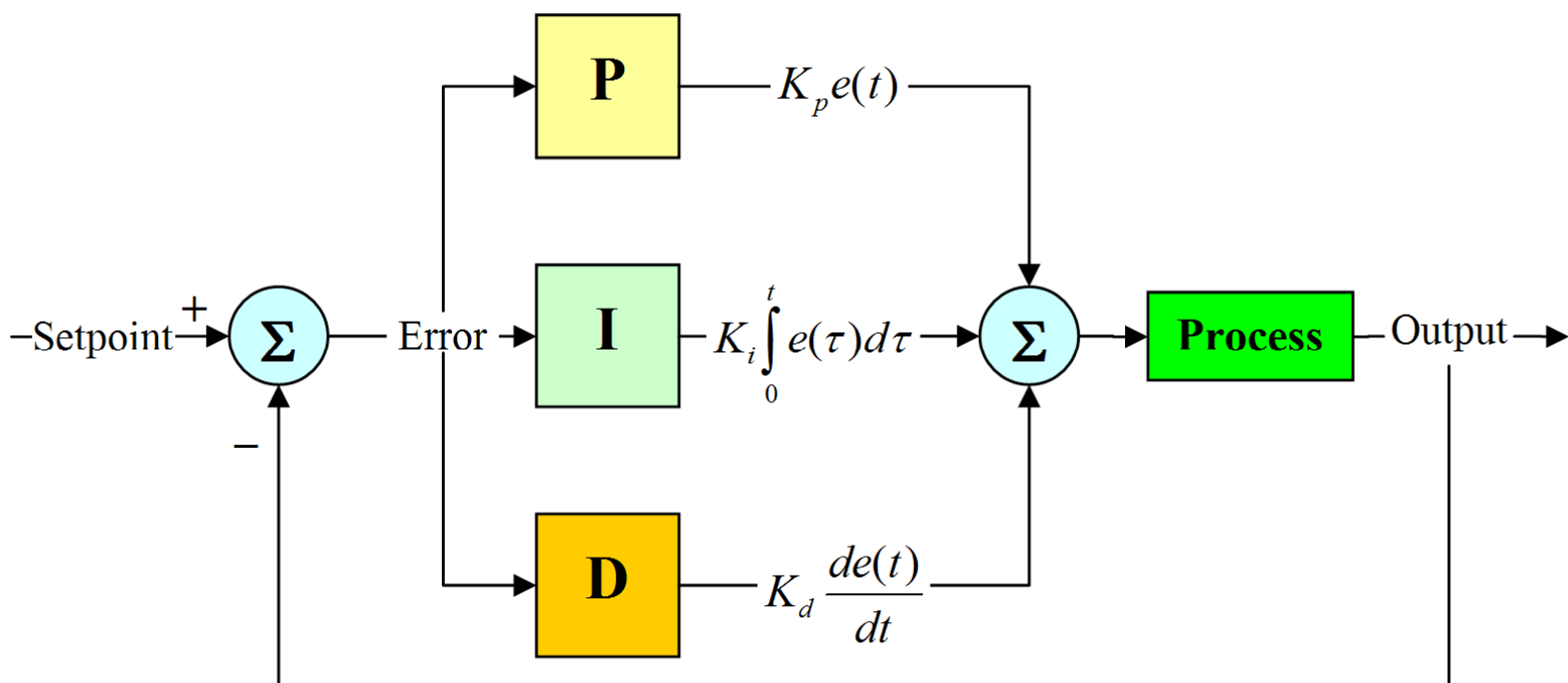
- > Electrical design including:
 - > Schematics
 - > Terminations
 - > Block diagrams
 - > Single lines
 - > general arrangement drawings.
- > Drafting
 - > Autocad
 - > Microstation
- > PLC and Remote IO electrical design
- > LV lighting and small power design.
- > Motor selection and design including VSD's and Soft Starters
- > MCC Design
- > Fieldbus network design including:
 - > Profibus PA
 - > Modbus
 - > Industrial Ethernet
- > Instrumentation
- > Electrical testing



PROCESS CONTROL

We can help you in getting the best performance from your plant. Our expert engineers work closely with your metallurgical team from development through to implementation.

- > Plant constraint control
- > Loop tuning and optimization
- > Advanced control techniques
- > Sequencing and process startups
- > Interlocks and equipment protection
- > Alarm audits and rationalisation
- > SCADA changes to assist operator control
- > Operator training
- > Reduction of operator variability through automation
- > Predictive control / model based control
- > Bottleneck optimisation



Our Engineering team can help unlock the maximum potential from your processing system by reducing downtime, increasing operator visibility and increasing equipment utilisation.

COMMISSIONING SERVICES

X2 Engineering have experience in the provision of control system and electrical design, commissioning and support services for a wide range of mining and industrial plant.



Process Plants

- > Iron ore wet and dry
- > Copper flotation
- > Leaching
- > Cyclone separation
- > Moisture reduction and filters

Mining Equipment

- > Mills (Sag, Ball and Regrind)
- > HPGR's
- > Overland ore transport
- > Crushers and sizers
- > Rock-breakers

Borefields

- > Bore skids
- > Pumping Stations
- > Booster Stations
- > Telemetry Systems

Mobile Machines

- > Stackers
- > Reclaimers
- > Ship Loaders

Auxiliary Systems

- > Thickeners
- > Blowers
- > Water supply systems
- > Reagents (Lime, Guar, Floc)
- > Dust Extraction





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